

Amendment to Claims

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Claim 1 (Amended): A method comprising:

in a ~~storage medium~~ physically addressable area of a system memory, storing one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system;

hosting an operating system capable of addressing the ~~storage medium~~ system memory; and,

~~wherein the operating system is capable of initiating execution of the one or more diagnostic procedures through a firmware interface~~

inhibiting the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures.

Claim 2 (Cancelled).

Claim 3 (Amended): The method of claim 1, wherein the one or more diagnostic modules comprise run-time drivers executable through ~~the~~ a firmware interface.

Claim 4 (original): The method of claim 1, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

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Claim 5 (Amended): The method of claim 1, the method further comprising:  
loading the one or more diagnostic modules to a first physically addressable area  
of a the system memory; and

loading the operating system to a second physically addressable area of the  
system memory from a non-volatile memory device.

Claim 6 (Amended): The method of claim 5, the method further comprising  
loading the one or more diagnostic modules to the first physically addressable area of  
the system memory from a basic input/output system (BIOS).


Claim 7 (Amended): The method of claim 1, the method further comprising:  
maintaining pointers in ~~the~~ a firmware interface to the diagnostic modules at an  
addressable portion of the ~~storage medium~~ system memory;  
~~detecting a change in virtual addressing by the operating system; and~~  
converting pointers in the firmware interface in response to ~~the~~ a change in  
virtual addressing by the operating system.

Claim 8 (Amended): An apparatus comprising:

a processor;

a memory to store data;

logic to store in a physically addressable area of the memory one or more  
diagnostic modules comprising machine-readable instructions for performing one  
or more diagnostic procedures of a processing system; and

 an operating system capable of initiating execution of the one or more diagnostic procedures on the processor ~~through a firmware interface; and~~  
logic to inhibit the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures from the physically addressable area.

Claim 9 (Cancelled).

Claim 10 (Amended): The apparatus of claim 8, wherein the one or more diagnostic modules comprise run-time drivers executable by the operating system through ~~the~~ a firmware interface.

Claim 11 (original): The apparatus of claim 8, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

Claim 12 (amended): The apparatus of claim 8, the apparatus further comprising:

logic to load the one or more diagnostic modules to a first physically addressable area of ~~a system~~ the memory; and

logic to load the operating system to a second physically addressable area of the ~~system~~ memory from a non-volatile memory device.

Claim 13 (amended): The apparatus of claim 12, the apparatus further comprising a basic input/output system (BIOS) comprising logic to load the one or more diagnostic modules to the first physically addressable area of the ~~system~~ memory.

Claim 14 (amended): The apparatus of 8, the apparatus further comprising:  
logic to maintain pointers in ~~the~~ a firmware interface to the diagnostic modules at an addressable portion of the storage medium;  
~~logic to detect a change in virtual addressing by the operating system;~~ and  
logic to convert pointers in the firmware interface in response to ~~the~~ a change in virtual addressing by the operating system.

Claim 15 (Amended): A circuit for initiating a boot sequence for a processing system, the circuit comprising:

logic to store in a physically addressable area of a storage medium one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system;  
logic to initiate an operating system capable of addressing the storage medium;  
~~wherein the operating system is capable of initiating execution of the one or more diagnostic procedures through a firmware interface;~~ and  
logic to inhibit the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures in the storage medium.

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Claim 16 (original). The circuit of claim 15, wherein the circuit comprises a basic input/output system (BIOS) adapted to integrate with the processing system.

Claim 17 (Cancelled).

Claim 18 (Amended): The circuit of claim 15, wherein the one or more diagnostic modules comprise run-time drivers executable by the operating system through the a firmware interface.

Claim 19 (Original). The circuit of claim 15, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.


Claim 20 (amended): The circuit of claim 15, the circuit further comprising:  
logic to load the one or more diagnostic modules to a first physically addressable area of ~~a system memory~~ the storage medium; and  
logic to load the operating system to a second physically addressable area of the ~~system memory~~ storage medium from a non-volatile memory device.

Claim 21 (amended): The circuit of claim 20, the circuit further comprising a basic input/output system (BIOS) comprising logic to load the one or more diagnostic modules to the first physically addressable area of the ~~system memory~~ storage medium.

Claim 22 (amended). The circuit of claim 15, the circuit further comprising:  
 logic to maintain pointers in the firmware interface to the diagnostic modules at  
 an addressable portion of the storage medium; and  
~~logic to detect a change in virtual addressing by the operating system; and~~  
 logic to convert pointers in the firmware interface in response to ~~the~~ a change in  
 virtual addressing by the operating system.

Claim 23. An article comprising:  
 a storage medium comprising machine-readable instructions stored thereon for:  
     initiating storage of machine-readable instructions for performing one or  
     more diagnostic procedures of a processing system in a first physical area of a  
     memory; and  
     initiating storage of machine-readable instructions for executing an  
     operating system for the processing system in a second physical area of the  
     memory; and  
~~, wherein the operating system is capable of initiating execution of the one~~  
~~or more diagnostic procedures through a firmware interface~~  
    inhibiting the operating system from remapping the machine readable  
instructions for performing the one or more diagnostic procedures in the first  
physical area of the memory.

Claim 24 (Cancelled).

 Claim 25 (Amended): The article of claim 23, wherein the one or more diagnostic modules comprise run-time drivers executable by the operating system through ~~the~~ a firmware interface.

Claim 26 (Original): The article of claim 23, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

~~Claim 27 (Cancelled).~~

Claim 28 (Amended): The article of claim 23, wherein the storage medium further comprises machine readable instructions stored thereon for loading the one or more diagnostic modules to the physically ~~addressable~~ area of the ~~system~~ memory from a basic input/output system (BIOS).

Claim 29 (Amended): The article of claim 23, wherein the storage medium further comprises machine-readable instructions stored thereon for:

maintaining pointers in ~~the~~ a firmware interface to the diagnostic modules at an addressable portion of the ~~storage medium~~ memory;

~~detecting a change in virtual addressing by the operating system; and~~

converting pointers in the firmware interface in response to ~~the~~ a change in virtual addressing by the operating system.

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Claim 30 (New): A method comprising:

in a storage medium, storing one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system;

hosting an operating system capable of addressing the storage medium, wherein the operating system is capable of initiating execution of the one or more diagnostic procedures through a firmware interface;

maintaining pointers in the firmware interface to the diagnostic modules at an addressable portion of the storage medium; and

converting pointers in the firmware interface in response to a change in virtual addressing by the operating system.

Claim 31 (new): The method of claim 30, wherein the one or more diagnostic modules comprise run-time drivers executable through the firmware interface.

Claim 32 (new): The method of claim 30, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

Claim 33 (new): The method of claim 30, the method further comprising:

loading the one or more diagnostic modules to a first physically addressable area of the storage medium; and



A1 loading the operating system to a second physically addressable area of the storage medium.

Claim 34 (new): The method of claim 33, the method further comprising loading the one or more diagnostic modules to the physically addressable area of the storage medium from a basic input/output system (BIOS).

35 (new): An apparatus comprising:  
a processor;  
a memory to store data;  
logic to store in the memory one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system;  
an operating system capable of initiating execution of the one or more diagnostic procedures on the processor through a firmware interface;  
logic to maintain pointers in the firmware interface to the diagnostic modules at an addressable portion of the storage medium; and  
logic to convert pointers in the firmware interface in response to a change in virtual addressing by the operating system.

Claim 36 (new): The apparatus of claim 35, wherein the one or more diagnostic modules comprise run-time drivers executable through the firmware interface.

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Claim 37 (new): The apparatus of claim 35, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

Claim 38 (new): The apparatus of claim 35, the apparatus further comprising:  
logic to load the one or more diagnostic modules to a first physically addressable area of a system memory; and

logic to load the operating system to a second physically addressable area of the system memory from a non-volatile memory device.

Claim 39 (new): The apparatus of claim 38, the apparatus further comprising a basic input/output system (BIOS) comprising logic to load the one or more diagnostic modules to the first physically addressable area of the system memory.

Claim 40 (new): An article comprising:  
a storage medium comprising machine-readable instructions stored thereon for:  
initiating storage of machine-readable instructions for performing one or more diagnostic procedures of a processing system in a first physical area of a memory;

initiating storage of machine-readable instructions for executing an operating system for the processing system in a second physical area of the

memory, wherein the operating system is capable of initiating execution of the one or more diagnostic procedures through a firmware interface;  
maintaining pointers in the firmware interface to the diagnostic modules at an addressable portion of the memory; and  
converting pointers in the firmware interface in response to a change in virtual addressing by the operating system.

Claim 41 (new): The article of claim 40, wherein the one or more diagnostic modules comprise run-time drivers executable through the firmware interface.

Claim 42 (new): The article of claim 40, wherein the diagnostic procedures comprise diagnostic procedures for testing one or more peripheral devices of the processing system.

Claim 43 (new): The article of claim 40, wherein the storage medium further comprises machine readable instructions stored thereon for:  
loading the one or more diagnostic modules to a first physically addressable area of the memory; and  
loading the operating system to a second physically addressable area of the memory from a non-volatile memory device.

Claim 44 (new): The article of claim 40, wherein the storage medium further comprises machine readable instructions stored thereon for loading the one or more

diagnostic modules to the physically addressable area of the system memory from a basic input/output system (BIOS).